IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) Method for operating an internal combustion engine of a vehicle comprising the steps of: ~~, in particular a motor vehicle, with~~

running said engine in a first operating range as the lean operating range, said running comprising operating ~~in which the internal combustion engine is operated~~ with a lean mixture which has an air excess and thus an oxygen excess, ~~and in~~ during which [[the]] nitrogen oxides produced by the internal combustion engine are stored in a nitrogen oxide storage catalyst, to discharge the nitrogen oxide storage catalyst by means of an engine control device switching from the lean operating range to the rich operating range taking place, in which the internal combustion engine is operated with a rich mixture which has a shortage of air and in which the nitrogen oxides stored in the nitrogen oxide storage catalyst during the lean operating range are discharged from the nitrogen oxide storage catalyst, and with a second operating range as a homogenous operating range in which the internal combustion engine is operated with an essentially stoichiometric homogenous mixture (lambda = 1), switching between the lean operating range and the homogeneous operating range being undertaken by the engine control device depending on the operation-dictated load requirement and/or rpm requirement when a definable switching condition is reached, and switching taking place by the engine control device into the rich operating range first for discharge of the nitrogen oxide storage catalyst before switching from the lean operating range to the homogeneous operating range, and the engine control device blocking switching into the lean operating range depending on a definable blocking criterion,

~~characterized in that~~

~~the engine control device blocks~~ blocking switching with the engine control device into the lean operating range if the additional amount of fuel consumption for discharges in a certain, definable evaluation interval which extends over several lean operating phases is greater than or equal to the reduced amount of fuel consumption by lean operation in this evaluation interval,

~~that the engine control device enables~~ enabling lean operation by the engine control device and thus switching between the lean operating range and the homogeneous operating range, if the

additional amount of fuel consumption for discharges in the evaluation interval is smaller than the reduced amount of fuel consumption by lean operation in this evaluation interval,

~~that~~ determining the reduced amount of fuel consumption ~~is determined~~ as a function of the raw mass flow value of the nitrogen oxide averaged over the evaluation interval, as a function of the amount of fuel saved which has been averaged over the evaluation time interval in the lean operating phases which occur in the evaluation interval compared to the homogeneous operating range phases in this evaluation interval, and as a function of the time between two torque requirements which exceed a definable load boundary value and/or rpm boundary value and which cause departure from the lean operating range, which time has been averaged over the evaluation interval, and

~~that~~ determining the additional amount of fuel consumption ~~is determined~~ as a function of a storage catalyst charging state averaged over the evaluation interval.

2. (Currently Amended) The process as claimed in claim 1, ~~wherein~~ further comprising:

computing the additional amount of fuel consumption which is caused by the rich operating phases in the evaluation interval ~~is computed~~ as the sum of a first amount of fuel which is required for discharge of the oxygen reservoir and a second amount of fuel which is required for discharge of the nitrogen oxide reservoir,

wherein the first amount of fuel is more or less constant per lean operating phase, and

wherein the second amount of fuel is at least a function of the raw nitrogen oxide emission during the lean time such that the second amount of fuel is averaged over the evaluation interval.

3. (Currently Amended) The process as claimed in claim 1 ~~or claim 2~~, ~~wherein~~ further comprising

computing the first lean time ~~is computed~~ from the quotient of the current nitrogen oxide storage capacity amount of the nitrogen oxide storage catalyst and the averaged nitrogen oxide raw mass flow value,

wherein the averaged time between two torque requirements which exceed a definable load boundary value and/or rpm boundary value and which cause departure from the lean operating range as the second lean time is compared to the first lean time such that the shorter of the two lean times is

then multiplied by the amount of fuel saved which has been averaged over the evaluation interval for determining the reduced amount of fuel consumption in the evaluation interval.

4. (Original) The process as claimed in claim 3, wherein the current nitrogen oxide storage capacity amount of the nitrogen oxide storage catalyst is determined as a function of the temperature and/or the ageing state and/or sulfurization.

5. (Currently Amended) The process as claimed in claim 3 ~~or claim 4~~, wherein the currently detected value of the nitrogen oxide storage capacity of the nitrogen oxide storage catalyst is determined depending on the operating point with consideration of the degree of ageing and/or sulfurization of the nitrogen oxide storage catalyst such that

the nitrogen oxide mass flow upstream from the nitrogen oxide storage catalyst and/or the nitrogen oxide mass flow downstream from the nitrogen oxide storage catalyst are each integrated over the same time interval,

wherein to establish the switching instant from the storage phase to the discharge phase and thus from the lean operating range to the rich operating range at least from the integral value of the nitrogen oxide mass flow upstream and/or downstream from the storage catalyst and/or the switching instant when a definable discharge switching condition is satisfied in the first stage for determination of the degree of ageing of the storage catalyst, the switching operating point is determined as a function of the instantaneous operating temperature at the instant of switching,

and wherein the respective switching operating point in a second stage for determining the degree of ageing of the storage catalyst is compared to the definable storage catalyst capacity field which runs over a temperature window, which is optimized especially with respect to fuel consumption, and which is formed by a plurality of individual operating points for a new and an aged storage catalyst such that

a switching operating point which lies within the storage catalyst capacity field does not constitute a failure to reach the minimum nitrogen oxide storage capacity, but the change relative to the previous operating point as a measure of the ageing of the storage catalyst, and wherein a switching operating point which departs from the storage catalyst capacity field conversely constitutes a failure to reach the minimum nitrogen oxide storage capacity.

6. (Original) The process as claimed in claim 5, wherein to establish the switching instant from the storage phase to the discharge phase the relative nitrogen oxide slip as the difference between the nitrogen oxide mass flow which has flowed into the nitrogen oxide storage catalyst and the nitrogen oxide mass flow which has flowed out of the nitrogen oxide storage catalyst is determined relative to the storage time such that the quotient of the integral values of the nitrogen oxide mass flow upstream and downstream from the nitrogen oxide storage catalyst is moreover brought into a relative relationship to the definable degree of conversion of the nitrogen oxide which is derived from the exhaust gas boundary value so that when this defined switching condition is present, switching from the storage phase to the discharge phase is carried out at the switching instant which has been optimized with respect to fuel consumption and storage potential.

7. (Currently Amended) The process as claimed in claim 5 [[or 6]], wherein the storage catalyst capacity field is limited relative to the temperature window on the one hand by a boundary line for a new storage catalyst and on the other hand by a boundary line for an aged storage catalyst which represents the boundary ageing state, the temperature window comprising preferably temperature values between approximately 200°C and approximately 450°C.

8. (New) The process as claimed in claim 1, wherein the vehicle is a motor vehicle.

9. (New) A method for operating an internal combustion engine of a vehicle comprising:

operating said engine in a first operating range comprising:

operating said engine with a lean mixture which has an air excess and an oxygen excess;

storing nitrogen oxides produced by said engine in a nitrogen oxide storage catalyst;

switching operation of the engine to a rich operating range, wherein the rich operating range comprising utilizing a shortage of air;

discharging the nitrogen oxides from the nitrogen oxide storage catalyst; and

operating said engine in a second operating range comprising:

running said engine with an essentially stoichiometric homogenous mixture (lambda = 1),

observing a definable switching condition depending on an operation-dictated load requirement and/or rpm requirement;

switching from the lean operating range to a rich operating range, upon reaching the definable switching condition;

blocking switching from the rich operating range to the homogeneous operating range if the additional amount of fuel consumption for discharges in a certain, definable evaluation interval which extends over several lean operating phases is greater than or equal to the reduced amount of fuel consumption by lean operation in this evaluation interval definable blocking criterion;

switching between the lean operating range and the homogeneous operating range, if the additional amount of fuel consumption for discharges in the evaluation interval is smaller than the reduced amount of fuel consumption by lean operation in this evaluation interval,

determining the reduced amount of fuel consumption as a function of the raw mass flow value of the nitrogen oxide averaged over the evaluation interval, as a function of the amount of fuel saved which has been averaged over the evaluation time interval in the lean operating phases which occur in the evaluation interval compared to the homogeneous operating range phases in this evaluation interval, and as a function of the time between two torque requirements which exceed a definable load boundary value and/or rpm boundary value and which cause departure from the lean operating range, which time has been averaged over the evaluation interval, and

determining the additional amount of fuel consumption as a function of a storage catalyst charging state averaged over the evaluation interval.

10. (New) The method of claim 9, comprising using an engine control device to perform said switching during said second operating range.

11. (New) The method of claim 9, comprising using an engine control device to perform said switching during said first operating range.

12. (New) A method for operating an internal combustion engine of a vehicle comprising: running said engine with an essentially stoichiometric homogenous mixture (lambda = 1),

observing a definable switching condition depending on an operation-dictated load requirement and/or rpm requirement;

switching from a lean operating range, having an air excess and an oxygen excess, to a rich operating range, having a shortage of air, upon reaching the definable switching condition, then to a homogenous operating range;

blocking switching from the rich operating range to the homogeneous operating range if the additional amount of fuel consumption for discharges in a certain, definable evaluation interval which extends over several lean operating phases is greater than or equal to the reduced amount of fuel consumption by lean operation in this evaluation interval definable blocking criterion;

switching between the lean operating range and the homogeneous operating range, if the additional amount of fuel consumption for discharges in the evaluation interval is smaller than the reduced amount of fuel consumption by lean operation in this evaluation interval,

determining the reduced amount of fuel consumption as a function of the raw mass flow value of the nitrogen oxide averaged over the evaluation interval, as a function of the amount of fuel saved which has been averaged over the evaluation time interval in the lean operating phases which occur in the evaluation interval compared to the homogeneous operating range phases in this evaluation interval, and as a function of the time between two torque requirements which exceed a definable load boundary value and/or rpm boundary value and which cause departure from the lean operating range, which time has been averaged over the evaluation interval, and

determining the additional amount of fuel consumption as a function of a storage catalyst charging state averaged over the evaluation interval.